

SEQUENCE LISTING

<110> Clawson, Gary A.
Pan, Wei-Hua
Thiboutot, Diane
Christensen, Neil

<120> METHODS AND MATERIALS FOR TREATING HUMAN
PAPILLOMAVIRUS INFECTIONS

<130> 14017-008US1

<140> US 10/519,122
<141> 2004-12-22

<150> PCT/US03/20340
<151> 2003-06-26

<150> US 60/449,066
<151> 2003-02-21

<150> US 60/417,997
<151> 2002-10-14

<150> US 60/391,795
<151> 2002-06-26

<160> 84

<170> FastSEQ for Windows Version 4.0

<210> 1
<211> 17
<212> DNA
<213> Artificial Sequence

<220>
<223> primer

<400> 1
caggaaacag ctatgac

17

<210> 2
<211> 17
<212> DNA
<213> Artificial Sequence

<220>
<223> primer

<400> 2
tgtaaaacga cggccag

17

<210> 3
<211> 67
<212> DNA

<213> Artificial Sequence

<220>

<223> synthetically generated template

<221> misc_feature

<222> (1)...(67)

<223> n = A,T,C or G

<400> 3

caggaaacag ctatgacnnn nnnnnrrggct agctacaacg annnnnnnnnn ctggccgtcg
ttttaca

60

67

<210> 4

<211> 17

<212> RNA

<213> Artificial Sequence

<220>

<223> target sequence

<400> 4

ugcaauguuu caggacc

17

<210> 5

<211> 17

<212> RNA

<213> Artificial Sequence

<220>

<223> target sequence

<400> 5

cccacagaaugu uaccaca

17

<210> 6

<211> 17

<212> RNA

<213> Artificial Sequence

<220>

<223> target sequence

<400> 6

uuaccacagu uaugcac

17

<210> 7

<211> 17

<212> RNA

<213> Artificial Sequence

<220>

<223> target sequence

<400> 7

gacgugagggua auaugac

17

<210> 8
<211> 17
<212> RNA
<213> Artificial Sequence

<220>
<223> target sequence

<400> 8
cauaguauau agagaug 17

<210> 9
<211> 17
<212> RNA
<213> Artificial Sequence

<220>
<223> target sequence

<400> 9
auuagugagu auagaca 17

<210> 10
<211> 17
<212> RNA
<213> Artificial Sequence

<220>
<223> target sequence

<400> 10
uauaguuugu auggaac 17

<210> 11
<211> 17
<212> RNA
<213> Artificial Sequence

<220>
<223> target sequence

<400> 11
gccacugugu ccugaag 17

<210> 12
<211> 17
<212> RNA
<213> Artificial Sequence

<220>
<223> target sequence

<400> 12
uauaagggggu cggugga 17

<210> 13
<211> 17

<212> RNA
<213> Artificial Sequence

<220>
<223> target sequence

<400> 13
guggaccggu cgaugua

17

<210> 14
<211> 17
<212> RNA
<213> Artificial Sequence

<220>
<223> target sequence

<400> 14
aaagaugccu ccacguc

17

<210> 15
<211> 17
<212> RNA
<213> Artificial Sequence

<220>
<223> target sequence

<400> 15
accuaaagggu ugugugg

17

<210> 16
<211> 17
<212> RNA
<213> Artificial Sequence

<220>
<223> target sequence

<400> 16
uagacacuuu aauuaug

17

<210> 17
<211> 17
<212> RNA
<213> Artificial Sequence

<220>
<223> target sequence

<400> 17
ugugugaaau agaaaaaa

17

<210> 18
<211> 17
<212> RNA
<213> Artificial Sequence

<220>
<223> target sequence

<400> 18
guggaagggu cguugcu 17

<210> 19
<211> 17
<212> RNA
<213> Artificial Sequence

<220>
<223> target sequence

<400> 19
gaagacuugu uacccua 17

<210> 20
<211> 17
<212> RNA
<213> Artificial Sequence

<220>
<223> target sequence

<400> 20
ccuguagggu uacauug 17

<210> 21
<211> 17
<212> RNA
<213> Artificial Sequence

<220>
<223> target sequence

<400> 21
gaagacagcu cagaaga 17

<210> 22
<211> 17
<212> RNA
<213> Artificial Sequence

<220>
<223> target sequence

<400> 22
auuaccaaaau acugacc 17

<210> 23
<211> 17
<212> RNA
<213> Artificial Sequence

<220>

<223> target sequence

<400> 23

cuuugaggau ccaacac

17

<210> 24

<211> 17

<212> RNA

<213> Artificial Sequence

<220>

<223> target sequence

<400> 24

accguugaau ccagcag

17

<210> 25

<211> 17

<212> RNA

<213> Artificial Sequence

<220>

<223> target sequence

<400> 25

ugggcacuau agaggcc

17

<210> 26

<211> 17

<212> DNA

<213> Artificial Sequence

<220>

<223> target sequence

<400> 26

cccagaaagt taccaca

17

<210> 27

<211> 17

<212> DNA

<213> Artificial Sequence

<220>

<223> target sequence

<400> 27

ttaccacagt tatgcac

17

<210> 28

<211> 17

<212> DNA

<213> Artificial Sequence

<220>

<223> target sequence

<400> 28	
gacgtgaggt atatgac	17
<210> 29	
<211> 17	
<212> DNA	
<213> Artificial Sequence	
<220>	
<223> target sequence	
<400> 29	
catagtatat agagatg	17
<210> 30	
<211> 17	
<212> DNA	
<213> Artificial Sequence	
<220>	
<223> target sequence	
<400> 30	
attagtgagt atagaca	17
<210> 31	
<211> 17	
<212> DNA	
<213> Artificial Sequence	
<220>	
<223> target sequence	
<400> 31	
tatagtttgt atggaac	17
<210> 32	
<211> 17	
<212> DNA	
<213> Artificial Sequence	
<220>	
<223> target sequence	
<400> 32	
tataagggggt cggtgga	17
<210> 33	
<211> 17	
<212> DNA	
<213> Artificial Sequence	
<220>	
<223> target sequence	
<400> 33	
gtggaccgggt cgatgta	17

<210> 34
<211> 17
<212> DNA
<213> Artificial Sequence

<220>
<223> target sequence

<400> 34
ggaggaggat gaaatag 17

<210> 35
<211> 17
<212> DNA
<213> Artificial Sequence

<220>
<223> target sequence

<400> 35
gcctccacgt ctgcaac 17

<210> 36
<211> 17
<212> DNA
<213> Artificial Sequence

<220>
<223> target sequence

<400> 36
acctaaaggt tgtgtgg 17

<210> 37
<211> 17
<212> DNA
<213> Artificial Sequence

<220>
<223> target sequence

<400> 37
attaaccaat atagaca 17

<210> 38
<211> 17
<212> DNA
<213> Artificial Sequence

<220>
<223> target sequence

<400> 38
ttacctgtgt cacaaggc 17

<210> 39

<211> 17
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> target sequence

<400> 39
 gccgttgtgt gaaatag

17

<210> 40
 <211> 17
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> target sequence

<400> 40
 gtggaagggt cgttgct

17

<210> 41
 <211> 17
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> target sequence

<400> 41
 gaagacttgt taccccta

17

<210> 42
 <211> 17
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> target sequence

<400> 42
 agaagacagc tcagaag

17

<210> 43
 <211> 17
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> target sequence

<400> 43
 attaccaaat actgacc

17

<210> 44
 <211> 17
 <212> DNA

<213> Artificial Sequence

<220>

<223> target sequence

<400> 44

ctttgaggat ccaacac

17

<210> 45

<211> 17

<212> DNA

<213> Artificial Sequence

<220>

<223> target sequence

<400> 45

accgttgaat ccagcag

17

<210> 46

<211> 17

<212> DNA

<213> Artificial Sequence

<220>

<223> target sequence

<400> 46

tgggcactat agaggcc

17

<210> 47

<211> 17

<212> DNA

<213> Artificial Sequence

<220>

<223> target sequence

<400> 47

gtgcttttgt gtgtcttg

17

<210> 48

<211> 17

<212> DNA

<213> Artificial Sequence

<220>

<223> target sequence

<400> 48

gcctctgcgt ttaggtg

17

<210> 49

<211> 17

<212> DNA

<213> Artificial Sequence

<220>		
<223> target sequence		
<400> 49		
agcaacgacc cttccac		17
<210> 50		
<211> 18		
<212> DNA		
<213> Artificial Sequence		
<220>		
<223> target sequence		
<221> misc_feature		
<222> 18		
<223> thymine is inverted		
<400> 50		
agcaacgacc cttccact		18
<210> 51		
<211> 23		
<212> RNA		
<213> Artificial Sequence		
<220>		
<223> catalytic core sequence		
<400> 51		
cugaugaguc cgugaggacg aaa		23
<210> 52		
<211> 38		
<212> RNA		
<213> Artificial Sequence		
<220>		
<223> exemplary sequence		
<400> 52		
uguggucuga ugaguccgug aggacgaaac uuucuggg		38
<210> 53		
<211> 17		
<212> RNA		
<213> Artificial Sequence		
<220>		
<223> 5' end flanking sequence		
<400> 53		
agcucgaccu cagaucu		17
<210> 54		
<211> 39		
<212> RNA		

<213> Artificial Sequence

<220>

<223> 3' end flanking sequence

<400> 54

caauugaaaa aaaaaaaaaaa aaaaaaaaaaa aaaaaaguc

39

<210> 55

<211> 13

<212> RNA

<213> Artificial Sequence

<220>

<223> 5' end flanking sequence

<400> 55

gguuccagga ucc

13

<210> 56

<211> 39

<212> RNA

<213> Artificial Sequence

<220>

<223> 3' end flanking sequence

<400> 56

gaauucaaaa aaaaaaaaaaa aaaaaaaaaaa aaaaaaguc

39

<210> 57

<211> 38

<212> RNA

<213> Artificial Sequence

<220>

<223> target sequence

<400> 57

ccacaccuga ugaguccgug aggacgaaac cuuuaggu

38

<210> 58

<211> 38

<212> RNA

<213> Artificial Sequence

<220>

<223> target sequence

<400> 58

cauaaucuga ugaguccgug aggacgaaaa agugucua

38

<210> 59

<211> 38

<212> RNA

<213> Artificial Sequence

<220>

<223> target sequence

<400> 59

agcaaccuga ugaguccgug aggacgaaac cciuuccac

38

<210> 60

<211> 76

<212> DNA

<213> Artificial Sequence

<220>

<223> target sequence (combined DNA and RNA)

<400> 60

agcaaccuga ugaguccgug aggacgaaac cciuuccaccc acaccugaug aguccgugag
gacgaaaaag tgtcta

60

76

<210> 61

<211> 76

<212> RNA

<213> Artificial Sequence

<220>

<223> target sequence

<400> 61

agcaaccuga ugaguccgug aggacgaaac cciuuccacca uaaucugaug aguccgugag
gacgaaaaag ugucua

60

76

<210> 62

<211> 76

<212> RNA

<213> Artificial Sequence

<220>

<223> target sequence

<400> 62

agcaaccuga ugaguccgug aggacgaaac cciuuccacag caaccugaug aguccgugag
gacgaaaaccc uuccac

60

76

<210> 63

<211> 94

<212> RNA

<213> Artificial Sequence

<220>

<223> target sequence

<400> 63

agcucgaccu cagaucuagc aaccugauga guccgugagg acgaaacccu uccaccaauu
gaaaaaaaaaaa aaaaaaaaaaaa aaaaaaaaaaaa aguc

60

94

<210> 64

<211> 132

<212> RNA

<213> Artificial Sequence

<220>

<223> target sequence

<400> 64

agcucgaccu cagaucuagc aaccugauga guccgugagg acgaaacccu uccacagcaa
ccugaugagu ccgugaggac gaaacccuuc caccaauuga aaaaaaaaaaaa aaaaaaaaaaa
aaaaaaaaaaag uc

60

120

132

<210> 65

<211> 31

<212> DNA

<213> Artificial Sequence

<220>

<223> target sequence

<400> 65

gttgcagagg ctagctacaa cgagtggagg c

31

<210> 66

<211> 31

<212> DNA

<213> Artificial Sequence

<220>

<223> target sequence

<400> 66

ctatttcagg ctagctacaa cgaacaacgg c

31

<210> 67

<211> 31

<212> DNA

<213> Artificial Sequence

<220>

<223> target sequence

<400> 67

agcaacgagg ctagctacaa cgaccttcca c

31

<210> 68

<211> 15

<212> DNA

<213> Artificial Sequence

<220>

<223> catalytic core sequence

<400> 68

ggctagctac aacga

15

<210> 69

<211> 31

<212> DNA

<213> Artificial Sequence

<220>

<223> target sequence

<400> 69

agcaacgagc ctagctacta cgacc ttcca c

31

<210> 70

<211> 31

<212> DNA

<213> Artificial Sequence

<220>

<223> target sequence

<400> 70

tccgaagagg ctagctacaa cgagacaaga t

31

<210> 71

<211> 31

<212> DNA

<213> Artificial Sequence

<220>

<223> target sequence

<400> 71

tccgaagagc ctagctacta cgagacaaga t

31

<210> 72

<211> 25

<212> DNA

<213> Artificial Sequence

<220>

<223> probe

<400> 72

ctttcccttt gcagcggttg ccttgt

25

<210> 73

<211> 24

<212> DNA

<213> Artificial Sequence

<220>

<223> primer

<400> 73

ctggaaaacc caacttctgt acaa

24

<210> 74

<211> 21

<212> DNA

<213> Artificial Sequence

<220>
<223> primer

<400> 74
accacggcac tgattttcag t

21

<210> 75
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> probe

<400> 75
tgtgcacagg agccaaaggt gaaga

25

<210> 76
<211> 17
<212> PRT
<213> Artificial Sequence

<220>
<223> synthetically generated polypeptide

<400> 76
His Gly Arg Leu Val Thr Leu Lys Asp Ile Val Leu Asp Leu Gln Pro
1 5 10 15
Cys

<210> 77
<211> 17
<212> PRT
<213> Artificial Sequence

<220>
<223> synthetically generated polypeptide

<400> 77
Met Glu Ser Lys Asp Ala Ser Thr Ser Ala Thr Ser Ile Asp Gln Leu
1 5 10 15
Cys

<210> 78
<211> 17
<212> PRT
<213> Artificial Sequence

<220>
<223> synthetically generated polypeptide

<400> 78
Leu Glu Leu Gln Gly Lys Ile Asn Gln Tyr Arg His Phe Asn Tyr Ala
1 5 10 15
Cys

<210> 79
<211> 17
<212> DNA
<213> Artificial Sequence

<220>
<223> exemplary sequence

<400> 79
tgtaaaacga cggccag

17

<210> 80
<211> 67
<212> DNA
<213> Artificial Sequence

<220>
<223> synthetically generated template (complementary strand)

<221> misc_feature
<222> (1)...(67)
<223> n = A,T,C or G

<400> 80
tgtaaaacga cggccagnnn nnnnnntcgt ttagctgc cynnnnnnnn gtcatacgctg
tttcctg

60

67

<210> 81
<211> 17
<212> DNA
<213> Artificial Sequence

<220>
<223> exemplary sequence (5' end)

<400> 81
aaaaaaaaaa aaaaaaa

17

<210> 82
<211> 17
<212> DNA
<213> Artificial Sequence

<220>
<223> exemplary sequence (3' end)

<400> 82
tgtaaaacga cggccag

17

<210> 83
<211> 38
<212> RNA
<213> Artificial Sequence

<220>
<223> synthetically generated sequence

<221> misc_feature
<222> (1)...(38)
<223> n = A,T,C or G

<400> 83
nnnnnnnnncu gaugaguccg ugaggacgaa annnnnnnn

38

<210> 84
<211> 31
<212> DNA
<213> Artificial Sequence

<220>
<223> synthetically generated sequence

<221> misc_feature
<222> (1)...(31)
<223> n = A,T,C or G

<400> 84
nnnnnnnnngg ctagctacaa cgannnnnnn n

31